## AMENDMENTS TO THE CLAIMS

This listing of the Claims replaces all prior versions, and listings, of the claims in the application:

1-39. (canceled)

40. (currently amended) A method ~~of~~ for quantitating *ex vivo* a population of ~~diagnosis or monitoring of infection with an intracellular pathogen in an individual wherein~~ peptide-specific immediate effector T cells present *in vivo* in a subject ~~are enumerated~~, which method comprises:

(a) providing a ~~fluid~~ sample from said subject ~~individual~~ containing ~~fresh~~ T cells, which have not been cultured *in vitro* for a period of time sufficient to effect differentiation of precursor effector T cells to immediate effector T cells,

(b) contacting said T cells ~~in contact~~ with a surface carrying an immobilized antibody to interferon-γ,

(~~b~~ c) presenting to ~~the~~ said T cells ~~a T cell activating~~ an activating amount of said peptide ~~derived from the pathogen~~ in the absence of any antigen presenting cells pre-cultured with said peptide,

(~~c~~ d) incubating ~~the fluid sample~~ said T cells under conditions to permit release of said interferon-γ but where the incubation time is not sufficient to effect differentiation of precursor effector T cells to immediate effector T cells, and

(~~d~~ e) detecting ~~released~~ said interferon-γ released in response to said peptide and bound to said immobilized antibody ~~to enumerate said peptide specific effector T cells,~~

~~wherein the incubation is for a time to permit interferon γ release by only those T cells that have been pre-sensitized *in vivo* to the T cell activating peptide and are capable of immediate effector~~

~~function without the need to effect division/differentiation by *in vitro* culture in the presence of the T cell-activating peptide; whereby said infection is diagnosed or monitored~~.

41. (currently amended) The method as claimed in claim 40, wherein said peptide is derived from an ~~the~~ intracellular pathogen ~~is selected from the group consisting of hepatitis B virus, hepatitis C virus, *M. tuberculosis*, *P. falciparum*, human immunodeficiency virus (HIV), and influenza virus~~.

42. (currently amended) The method as claimed in claim ~~40~~ 41, wherein said peptide is an ESAT-6 peptide of *M. tuberculosis* ~~is presented to the T cells~~.

43. (currently amended) The method as claimed in claim 40, wherein ~~the~~ said T cells are peripheral blood mononuclear cells.

44. (currently amended) The method as claimed in claim 40, wherein ~~a~~ said peptide has ~~of~~ 7-12 amino acid residues in length ~~is added to the T-cell-containing fluid, which~~ and is recognized by CD8+ T cells.

45. (currently amended) The method as claimed in claim 40, wherein ~~the resulting fluid mixture is incubated~~ said incubation is under non-sterile conditions.

46. (currently amended) The method as claimed in claim ~~40~~ 41, wherein ~~the~~ said peptide is a pre-identified epitope from a protein of ~~the~~ said intracellular pathogen.

47. (currently amended) The method as claimed in claim 40, wherein said incubation is continued for a time of 4 to 24 hours.

48. (currently amended) The method as claimed in claim 40, wherein ~~the T cells are taken from a patient~~ said subject is known to be suffering, or to have suffered from, infection with ~~the~~ an intracellular pathogen.

49. (currently amended) The method as claimed in claim 41, wherein ~~the~~ said intracellular pathogen is HIV.

50. (currently amended) The method as claimed in claim 40, wherein ~~the individual~~ said subject has been immunized with a vaccine.

51. (currently amended) A method ~~of diagnosis or monitoring of infection with *M. tuberculosis* in an individual wherein peptide~~ for quantitating *ex vivo* a population of ESAT-6 peptide-specific immediate effector T cells present *in vivo* in a subject ~~are enumerated~~, which method comprises:

(a) providing a ~~fluid~~ sample ~~comprising peripheral blood mononuclear cells~~ from said ~~individual~~ subject containing ~~fresh~~ T cells, which have not been cultured *in vitro* for a period of time sufficient to effect differentiation of precursor effector T cells to immediate effector T cells,

(b) contacting said T cells ~~in contact~~ with a surface carrying an immobilized antibody to interferon-γ,

(~~b~~ c) presenting ~~an ESAT-6 peptide of *M. tuberculosis*~~ to said T cells an activating amount of said ESAT-6 peptide ~~in the fluid sample~~ in the absence of any antigen presenting cells pre-cultured with said ESAT-6 peptide,

(~~c~~ d) incubating ~~the resulting fluid sample~~ said T cells under conditions to permit release of said interferon-γ but where the incubation time is not sufficient to effect differentiation of precursor effector T cells to immediate effector T cells, and

(~~d~~ e) detecting ~~released~~ said interferon-γ released in response to said ESAT-6 peptide and bound to said immobilized antibody ~~to enumerate said peptide-specific effector T cells,~~

~~wherein the incubation is for a time to permit interferon-γ release by only those T cells that have been pre-sensitized *in vivo* to the ESAT-6 peptide and are capable of immediate effector function without the need to effect division/differentiation by *in vitro* culture in the presence of the ESAT-6 peptide; whereby said infection is diagnosed or monitored~~.

52. (currently amended) The method as claimed in claim 51, wherein ~~a~~ said ESAT-6 peptide has ~~of~~ 7-12 amino acid residues in length ~~is added to the T-cell containing fluid sample, which~~ and is recognized by CD8+ T cells.

53. (currently amended) The method as claimed in claim 51, wherein ~~the peptide-containing fluid sample is incubated~~ said incubation is under non-sterile conditions.

54. (currently amended) The method as claimed in claim 51, wherein ~~the peripheral blood mononuclear cells are taken from a patient~~ said subject is known to be suffering, or to have suffered from, infection with *M. tuberculosis*.

55. - 58. (cancelled)

59. (currently amended) The method as claimed in claim 51, wherein ~~the~~ said incubation is for a time from 4 to 24 hours.

60. (currently amended) The method as claimed in claim 40, wherein ~~the~~ said incubation is for a time from 6 to 16 hours.

61. (cancelled)

62. (currently amended) The method as claimed in claim 51, wherein ~~the~~ said incubation is for a time from 6 to 16 hours.

63. (currently amended) The method as claimed in claim 41, wherein ~~the~~ said intracellular pathogen is *M. tuberculosis*.

64. (new) The method as claimed in claim 40, further comprising enumerating said peptide-specific immediate effector T cells.

65. (new) The method as claimed in claim 41, wherein said intracellular pathogen is selected from a group consisting of hepatitis B virus, hepatitis C virus, *M. tuberculosis*, *P. falciparum*, human immunodeficiency virus (HIV), and influenza virus.

66. (new) The method as claimed in claim 48, whereby said infection is monitored.

67. (new) The method as claimed in claim 50, whereby the induction or maintenance of said peptide-specific T cells following said immunization is monitored.

68. (new) The method as claimed in claim 51, further comprising enumerating said ESAT-6 peptide-specific immediate effector T cells.

69. (new) The method as claimed in claim 54, whereby said infection is monitored.